

Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12193
Entry Year 2022
Acreage: 1,082
County Iron

Management Area: Michigamme Reservoir

Revision Date: 2020-10-19 Stand Examiner: Ed Rice

Legal Description:

T44N, R31W Sections 4, 5, 6, 7, 8, 9 and 10

Identified Planning Goals:

Optimize sustainable timber production while enhancing and protecting wildlife habitat. Continue the hardwood stands on 20 year alternating cutting cycles, moving the stands toward regulation. Protect the riparian areas and transition zones during management activity.

Soil and topography:

Rolling terrain, some areas are fairly steep. A variety of soils from Wabeno silt loams and Pence fine sandy loams along the Fence River to Lupton– Cathro soil in the lower areas.

Ownership Patterns, Development, and Land Use in and Around the Compartment:

State has broken ownership in this area but all have access. Most of the surrounding land is owned by industrial forest ownership interspersed with pirvate ownership.

Unique Natural Features:

None identified

Archeological, Historical, and Cultural Features:

None known

Special Management Designations or Considerations:

None known

Watershed and Fisheries Considerations:

This compartment contains Margeson Creek and two unnamed streams that are Designated Type 1 trout streams less than 50' in width. A 300' buffer is recommended for these riparian areas susceptible to Aspen regeneration. For areas not susceptible to Aspen regeneration, 100' plus 5' per 1% increase in slope; buffers are recommended to protect these areas in accordance with Best Management Practices. A portion of the Fence River is also within this compartment however it is not a Designated Trout stream. Therefore a 100' buffer is recommended for this area of the Fence River. Buffers are recommended to protect these areas in accordance with Best Management Practices.

Wildlife Habitat Considerations:

Compartment 193 is in the Deerfoot Lodge deeryard, north of the Michigamme Reservoir. Deer are currently heavily using much of the compartment as a wintering complex. This compartment contains State Game Fund Purchased Lands. This area has been altered significantly in the last 30 years. Mead Paper converted large tracts of aspen/northern hardwoods to red pine or larch. International Paper, State of Michigan and private landowners have also harvested significant amounts of timber. A high priority for wildlife is the maintenance and restoration of travel corridors. Aspen old enough or large enough to benefit cavity nesters and raptors have been greatly reduced. Any existing aspen should be held if possible. If harvest takes place, care should be taken to protect the drainages, travel corridors and transition zones.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. There is insufficient data to determine the glacial drift thickness. The Precambrian Hemlock Formation, Randville Dolomite and Archean granite/gneiss subcrop below the glacial drift. The Randville is quarried for marble/stone nine miles to the south. The Michigan discovery of kimberlite was near Lake Ellen, approximately four miles to the south. The Porter and Warner abandoned iron mines are located eleven miles to the west. This compartment was previously leased for metallic exploration. The nearest gravel pit is located five miles to the southwest. There is no economic oil and gas production in the UP.

Vehicle Access:

There is a fairly good road system with maintenance to access the State land. Interior roads on the state land are for the most part poor or impassible.

Survey Needs:

Recreational Facilities and Opportunities:

Fire Protection:

This compartment does not lend itself to fire starts given the hardwood and aspen fuel types.

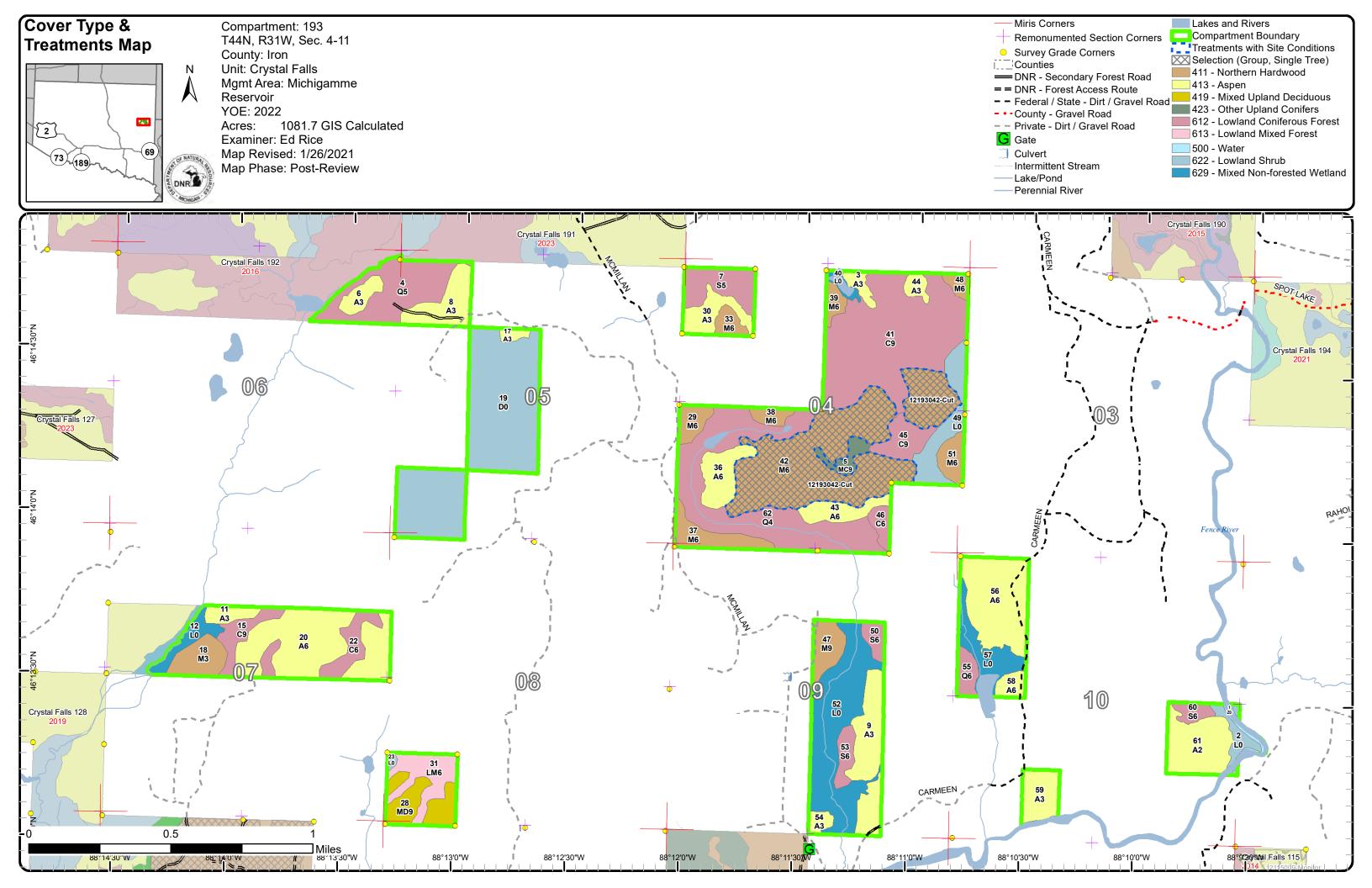
Additional Compartment Information:

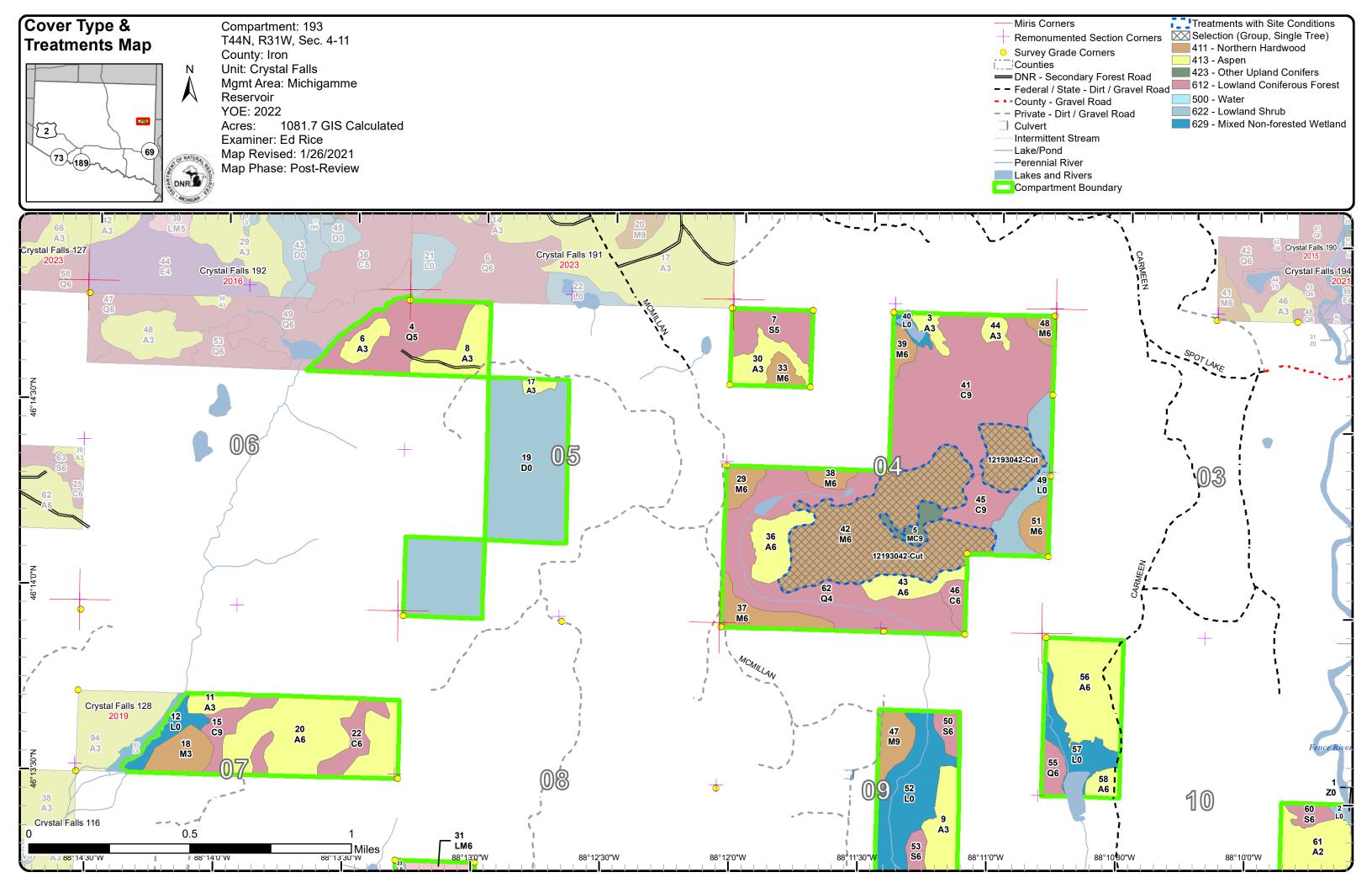
The following reports from the Inventory are attached:

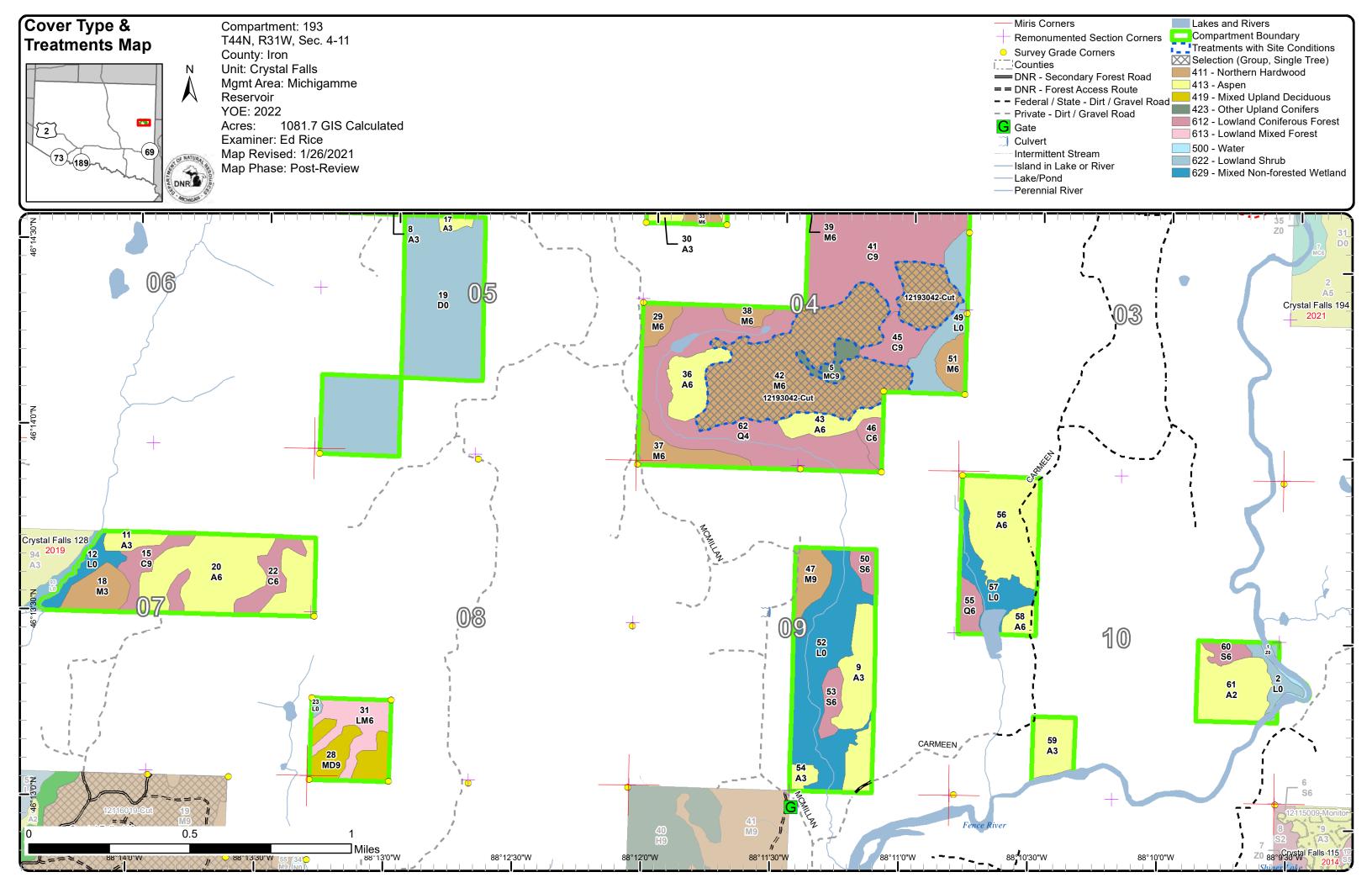
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

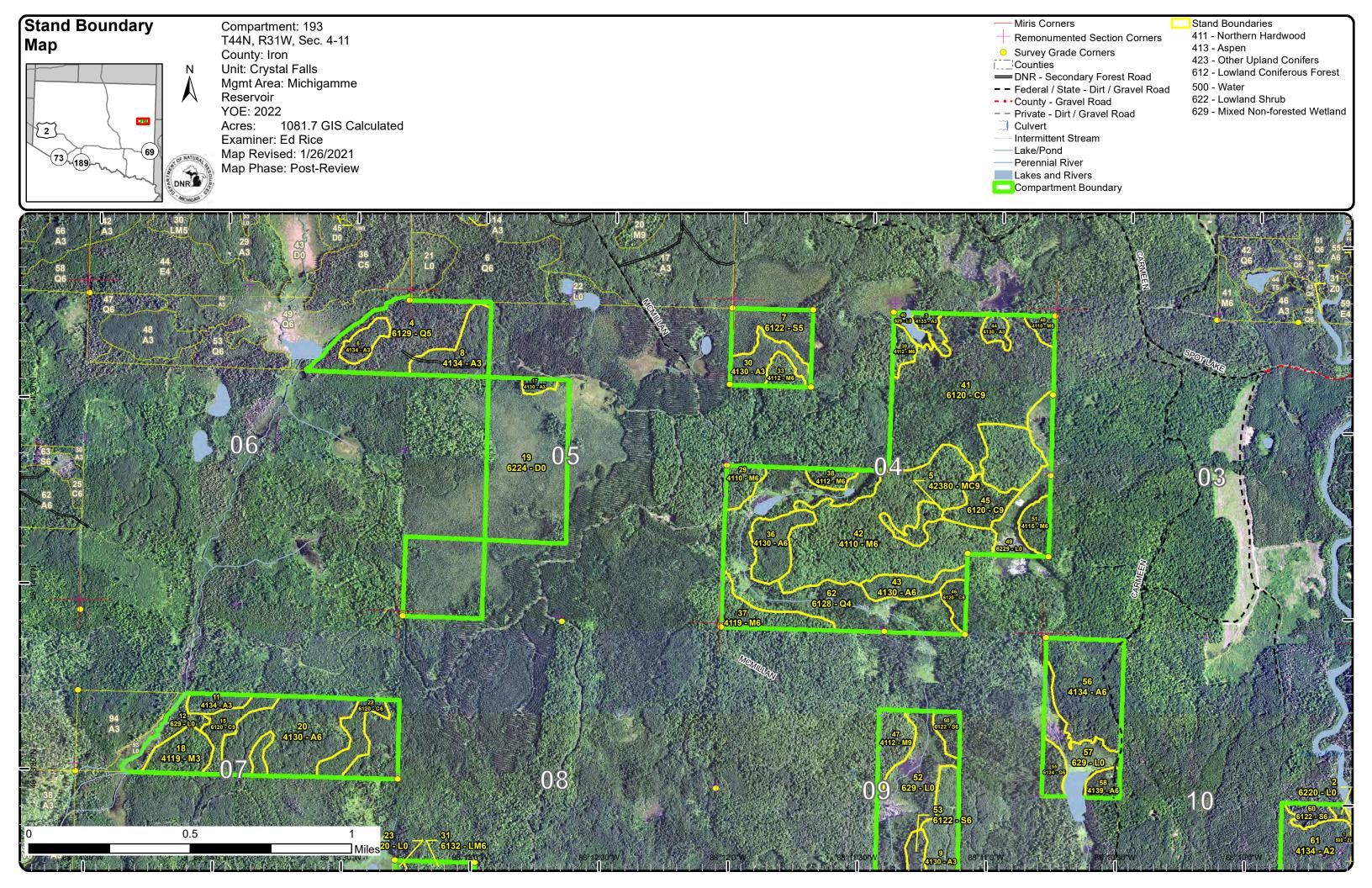
The following information is displayed, where pertinent, on the attached compartment maps:

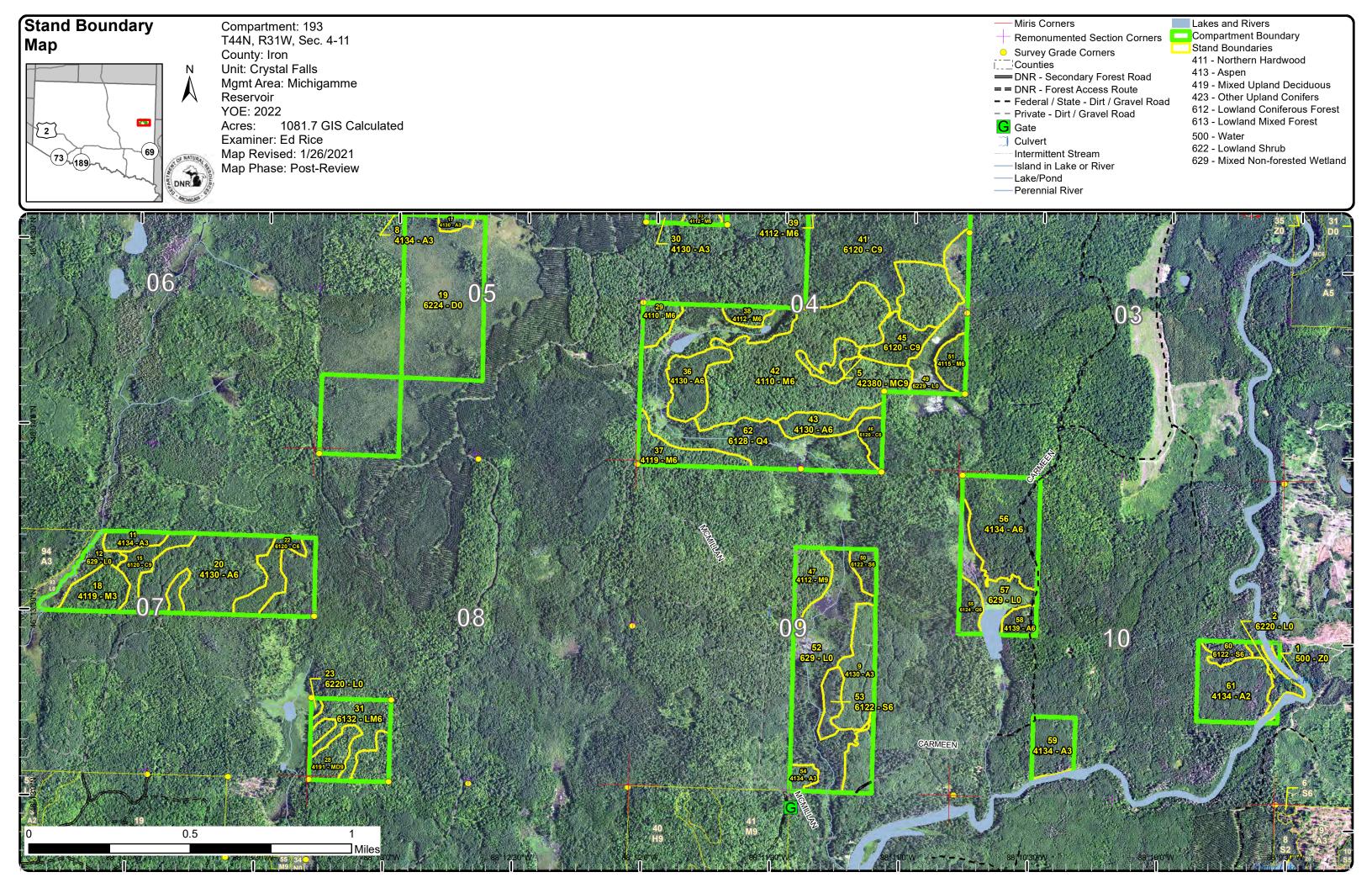
Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries
Details on the road access system

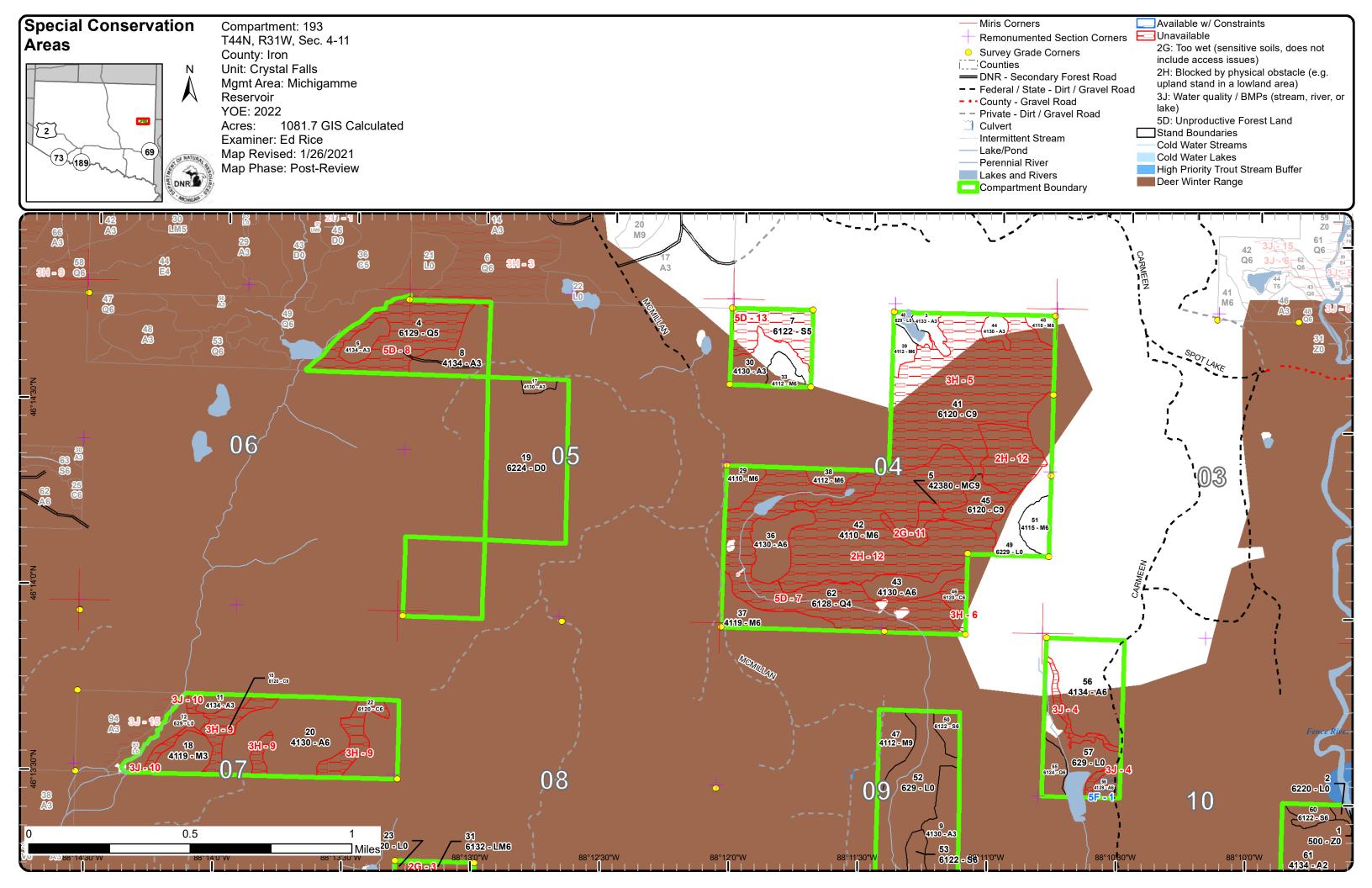


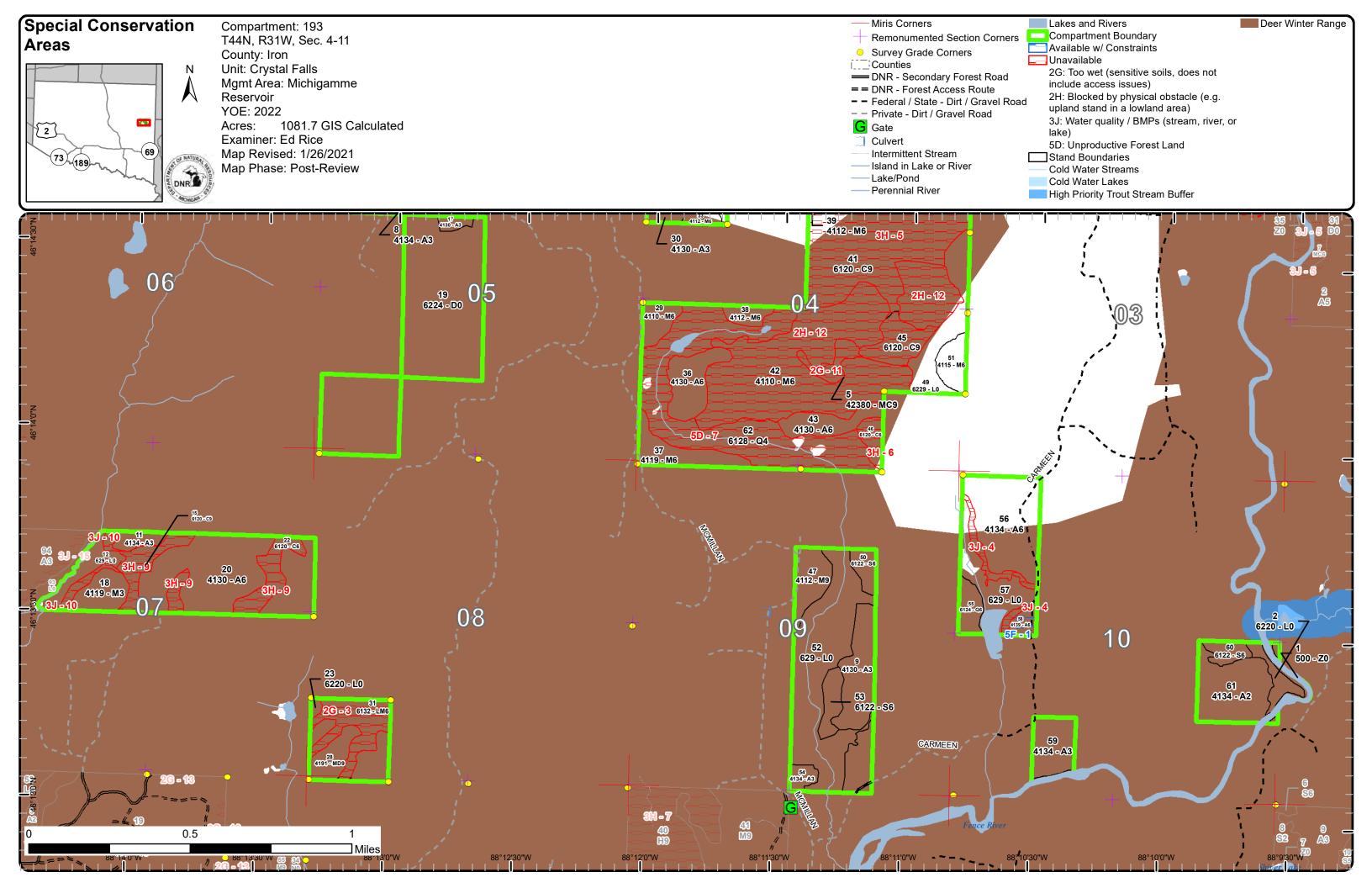












Report 1 - Total Acres by Cover Type and Age Class

Crystal Falls Mgt. Unit

Ed Rice : Examiner

Compartment 193 Year of Entry 2022



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Age Class

	* Age	in the second second	3 / 5	& / &		\$ \		/ } /&					Zaz,					, 34 34 34 S	No. No.
Aspen	0	0	44	141	41	49	0	0	0	0	0	0	0	0	0	0	0	0	275
Cedar	0	0	0	0	0	0	0	0	6	0	0	145	0	0	0	0	0	0	151
Lowland Conifers	0	0	0	0	0	0	7	0	0	81	40	0	0	0	0	0	0	0	128
Lowland Mixed Forest	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	19
Lowland Shrub	124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	124
Lowland Spruce/Fir	0	0	0	0	0	0	18	0	0	0	20	0	0	0	0	0	0	0	38
Mixed Upland Deciduous	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	20
Northern Hardwood	0	0	0	14	0	0	0	8	165	0	0	0	0	0	0	0	0	12	198
Treed Bog	117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	117
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6
Water	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	246	0	44	155	41	49	44	28	171	81	60	151	0	0	0	0	0	12	1081



Report 2 – Treatment Summary

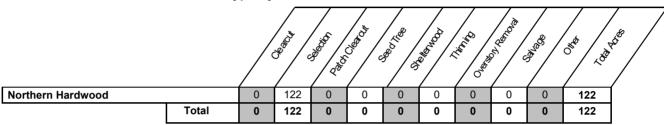
Crystal Falls Mgt. Unit Year of Entry: 2022

Acres of Harvest

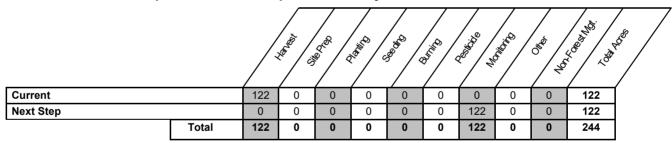
Compartment 193
Total Compartment Acres: 1,082

Commercial Harvest Harvests with Site Condition - 122
Next Step Harvest - 0
Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



Crystal Falls Mgt. Unit Report 3 -- Treatments

Compartment: 193 Year of Entry: 2022 DNR DNR R

Treatment Acres Stand Size Stand BA **Treatment Treatment** Cover Type Age Habitat Method Age Objective Name CoverType Density Range Type Structure Cut

Proposed Treatments:

S

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d

4212193042-Cut121.9 4110 - Sugar MaplePoletimber73111-HarvestSingle Tree411 - NorthernUneven-NoAssociationWell140SelectionHardwoodAged

Prescription could thin to 80 BA. concentrate removals on high risk trees, r maple at sawtimber maturity. keep all species and sizes represented in the stand. do not cut y birch, b ash, oak, hemlock, w pine or large, hardwood stand w spruce. buffer all vernal and low area. protect advanced h maple regen as much as possible

access will need considerable road improvement across a beaver dam - old road has turned into the dam and previous culvert is non

functional.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable n hardwoods

Regen:
Other
Comment:

<u>Site Condition</u> Blocked by Obstacle <u>Proposed Start Date:</u> 10/1 /2021

Total Treatment Acreage Proposed: 121.9

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Ed Rice : Examiner

Compartment: 193 Year of Entry: 2022



Availa	ability for	Managemer	nt							
Total	Acres	Acres Avail	Acres		Oomina	nt Site	e Cond	ditions	5	
Acres	Available	With Condition	Not Available		5F	2G	2H	3H	3J	5D
275	263	4	9	Aspen	4				9	
151	0	0	151	Cedar				151		
128	7	0	121	Lowland Conifers						121
19	1	0	19	Lowland Mixed Forest		19				
125	125	0	0	Lowland Shrub						
37	19	0	19	Lowland Spruce/Fir						19
19	19	0	0	Mixed Upland Deciduous						
199	74	0	125	Northern Hardwood			122		3	
117	117	0	0	Treed Bog						
6	0	0	6	Upland Conifers		6				
5	5	0	0	Water						
1,082	629	4	449	Total Forested Acres	4	25	122	151	11	140
-	58%	0%	41%	Relative Percent		-	-	-	-	-

*Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Available	5F: Evaluated for Forest Health Considerations	4	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
3	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	19	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	Unspecified	Unspecified	Unspecified
(Comments:						

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Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Ed Rice : Examiner



4	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	7	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	119	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	6	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
	Comments: springs throughout						
7	Unavailable	5D: Unproductive Forest Land	81	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments:						
8	Unavailable	5D: Unproductive Forest Land	42	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
9	Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	27	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Ed Rice : Examiner

Compartment: 193 Year of Entry: 2022



10	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	5	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
	Comments:						
11	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	6	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments: multiple vernal pond	ds throughout, hemlock, cedar					
12	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	122	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: beaver dam has ov	ertaken road over the past 30 y	/ears				
13	Unavailable	5D: Unproductive Forest Land	19	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

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Mgt. Unit

Compartment: #Type! Year of Entry:



Report 5 - PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				

Crystal Falls Mgt. Unit Compartment: 193
Year of Entry 2022



Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS

* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

Conservati Area	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen condition stocked trout populations and those of other coldwater fish specific conditions for coldwater fishes may occur in Michigan lakes if the groundwater inflows, or are located in colder (northern) areas of Director's action and designated as trout resources by Fisheries	es to persist from year to year. Suitable by are relatively deep, have substantial the state. Such lakes are established by
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen cond stocked trout populations and those of other coldwater fish speci year to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such streams designated as trout resources by Fisheries Order 210.	es (e.g., slimy sculpin) to persist from se conditions due to substantial
SCA	Habitat Area	An area that provide some specific need for the life cycle of wildle and Waterfowl Production Areas, deer wintering complexes in low openings and savannas. Habitat areas are distinct from critical hendangered or threatened species (such as Kirtland's warbler or general in nature, are not primarily associated with threatened or covered by species recovery plans that are developed in cooperations.	wland conifer communities, grassland abitat designated for recovery of piping plover areas) in that they are more endangered species, and are not
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in influences the aquatic ecosystem and vice-versa. Because of the streams and open water wetlands, riparian areas harbor a high documentities are ecologically and socially significant in their effects as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, liversity of plants and wildlife. Riparian cts on water quality and quantity, as well



Stand	Level 4 Co	over Type	;	Size De	ensity	Acres	Stand Age	BA Range	Managed \$	Site	General Comments	MICHIGAN .
1	500 -	- Water		Nonsto	ocked	5.4		Unspecified	No		Fence River	
2	6220 - A	lder/willow		Nonsto	ocked	7.1		Unspecified	No		tag alder, swamp grass along Fence River, floodplain	
3	4133 - Aspe	en, Mixed P	ine	Sapling	g Well	4.5	17	Immature	N/A		super canopy w pine	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Cai	nopy Specie	s Density	Avg. Height	Size		
	Quaking Aspen	60	Sapling	2	17		Inut (Spp.)	Medium	< 5 feet	Tall Shrub		
	Balsam Fir	10	Sapling/Pole		,		,					
	White Pine	20	XLog	18								
	Red Maple	10	Sapling	2								
4	6129 - Mixed Co Fo	oniferous Lo orest	owland Pol	letimbe	r Mediu	m 39.7	96	51-80	N/A		areas of heavy tag alder	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Specie	s Density	Avg. Height	Size		
	Balsam Fir	20	Pole/Sapling	6		Ва	lsam Fir	Low	Variable	Seeding		
	Black Spruce	20	Pole	7	58	Та	g Alder	Medium	5 - 10 feet	Tall Shrub		
No	rthern White Cedar	40	Log/Pole	10	96							
	Tamarack	10	Pole	7								
	Quaking Aspen	5	Log/Pole	10								
	Black Ash	5	Pole	6								
5	42380 - Non Pin Mixed D	e Upland C Deciduous	Conifer, S	Sawtimb	er Well	6.4	102	141-170	N/A		vernal ponds	
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Car	nopy Specie	s Density	Avg. Height	Size		
	Red Maple	35	Log	14	75	Whit	e Spruce	Low	5 - 10 feet	Sapling		
	Yellow Birch	5	Log	12	,							
No	rthern White Cedar	35	Log	14	102							
	Hemlock	25	XLog	20								
6	4134 - Aspe	en, Spruce/	Fir	Sapling		7.0	28	Unspecified	N/A			
	Canopy Species	% Cover			I Age							
	Quaking Aspen	65	Sapling/Pole	3	28							
	Balsam Fir	15	Sapling/Pole									
	White Spruce	15	Sapling	2								
	Black Spruce	5	Sapling	2								
7	6122 - BI	ack Spruce	e Pol	letimbe	r Mediu	m 19.5	96	1-50	N/A		stunted bog spruce	
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Car	nopy Specie	s Density	Avg. Height	Size		
	Balsam Fir	49	Pole/Sapling	6		Ва	lsam Fir	Low	Variable	Seeding		
	Black Spruce	51	Pole/Sapling	6	96	Blac	k Spruce	Low	Variable	Seeding		



Stan	d Level 4 C	over Type	;	Size De	nsity	Acres	Stand Age	BA Range	Managed S	Site	General Comments	MICHIGAN .
8	4134 - Asp	en, Spruce/	Fir	Sapling	Well	19.3	25	Unspecified	N/A		aspen just moving into poletimber size class	
	Canopy Species	% Cover	Size Class	DBH	Age							
	Quaking Aspen	75	Sapling/Pole	4	25							
	Balsam Fir	10	Sapling	2								
	White Spruce	10	Sapling	2								
	Black Cherry	5	Sapling	2								
9	4130	- Aspen		Sapling	Well	31.5	17	Unspecified	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age							
	Sugar Maple	5	Sapling	1								
	Red Maple	5	Sapling	1								
	Quaking Aspen	80	Sapling	1	17							
	Balsam Fir	5	Sapling	2								
	White Spruce	5	Sapling	3								
11	4134 - Asp	en, Spruce/	Fir	Sapling	Well	6.4	25	Immature	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age							
	Red Maple	15	Sapling	3								
	Quaking Aspen	65	Sapling/Pole	4	25							
	Balsam Fir	10	Sapling	3								
	White Spruce	10	Sapling	3								
12	629 - Mixed nor	n-forested w	vetland	Nonsto	cked	9.6		Unspecified	No		Lowland and creek	
15	6120 - Lo	wland Ceda	ar S	Sawtimbe	er Well	11.1	102	Unspecified	N/A		cedar is in small groves/clumps also with scattered trees.	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size		
	White Pine	5	XLog	20		Ta	ag Alder	High	5 - 10 feet	Tall Shrub		
	Red Maple	20	Pole	7								
No	orthern White Cedar	75	Log	14	102							
17	4130	- Aspen		Sapling	Well	2.7	25	Immature	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age							
	Quaking Aspen	85	Pole/Sapling		25							
	Balsam Fir	10	Sapling/Pole	4								
	White Spruce	5	Sapling/Pole	4								



Stand	d Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed 9	Site	General Comments
18	4119 - Mixed No	orthern Hard	dwoods	Sapling	Well	14.0	25	Immature	N/A		scattered spruce. areas of semi open
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Specie	s Density	Avg. Height	Size	
	Paper Birch	40	Sapling	4		Hazeln	ut (Beaked)	Medium	5 - 10 feet	Tall Shrub	
	Red Maple	45	Sapling/Pole	3	25						•
	Sugar Maple	5	Sapling	2							
	Black Cherry	10	Sapling	3	28						
19	6224	Treed Bog		Nonsto	cked	116.6	0	Unspecified	No		bog with spruce, tamarack
20	4130	- Aspen	F	Poletimb	er Well	63.2	25	Unspecified	N/A		very scattered w birch saplings. areas throughout the stand are higher
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Specie	s Density	Avg. Height	Size	stocked to r maple saplings.
	Red Maple	10	Sapling	2			d Maple	High	5 - 10 feet	Sapling	
	Quaking Aspen	75	Pole/Sapling		25		·				
	White Spruce	10	Pole/Sapling	5							
	Black Cherry	5	Sapling	2							
22	6120 - Lo	wland Ceda	ar F	oletimb	er Well	15.4	102	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	10	Pole	8		Ta	g Alder	Medium	5 - 10 feet	Tall Shrub	
No	orthern White Cedar	65	Log	12	102						
	Yellow Birch	5	Log/Pole	10							
	Black Ash	20	Pole	6							
23	6220 - A	lder/willow		Nonsto	cked	1.1		Unspecified	No		
28	4191 - Mixed Upla Co	and Decidu	ous with S	Sawtimb	er Well	19.5	66	81-110	N/A		heavy browse on r maple stump sprouts
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Specie	s Density	Avg. Height	Size	
	Sugar Maple	55	Log/Pole	10	66	Sug	ar Maple	Medium	>20 feet	Sapling	
	Red Maple	35	Pole/Log	9							•
	Yellow Birch	5	Log	12							
No	orthern White Cedar	5	Log	14							
29	4110 - Sugar N	/laple Assoc	ciation F	Poletimb		7.7	66	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Specie	s Density	Avg. Height	Size	
	Sugar Maple	90	Log/Pole	10	66		ar Maple	Low	Variable	Seeding	
	Red Maple	10	Log/Pole	10		Red	d Maple	Low	Variable	Seeding	



Stan	d Level 4 Co	over Type	S	ize De	nsity	Acres	Stand Age E	BA Range	Managed S	ite	General Comments	MICHIGAN .
30	4130	- Aspen	;	Sapling	Well	13.0	31 L	Jnspecified	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age							
	Quaking Aspen	85	Pole/Sapling	5	31							
	Balsam Fir	10	Pole/Sapling	5								
	White Spruce	5	Pole/Sapling	5								
31	6132 - Mixed Lo Ce	wland Fore edar	est with Po	oletimb	er Well	19.3	53	111-140	N/A		wet - scattered boulders. cedar/hemlock inclusions	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size		
	Red Maple	10	Log/Pole	10		Ва	lsam Fir	Low	5 - 10 feet	Sapling		
	Black Ash	30	Pole	6	53	Bla	ack Ash	Medium	10 - 20 feet	Sapling		
No	orthern White Cedar	25	Log	14							1	
	White Spruce	20	Log	12								
	Yellow Birch	10	Pole/Log	9								
	Hemlock	5	XLog	18								
33	4112 - Maple, Asso	Beech, Ch	nerry Po	oletimb	er Well	5.6	71	81-110	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size		
	Sugar Maple	40	Pole/Log	10	7.4							
			i ole/Log	10	71	Sug	gar Maple	Low	Variable	Seeding		
	Red Maple	60	Pole/Log	10	71		gar Maple ed Maple	Low	Variable Variable	Seeding Seeding		
	Red Maple					Re						
36	·		Pole/Log	10		Re	d Maple Isam Fir	Low	Variable	Seeding	aspen 2 - 7" dbh. scattered cherry	
36	·	60	Pole/Log	10 oletimb	71	Re Ba	ed Maple Isam Fir	Low Low	Variable Variable	Seeding	aspen 2 - 7" dbh. scattered cherry	
36	4130	60 - Aspen	Pole/Log	10 oletimb	71 er Well	Re Ba 16.5 Sub-Ca	ed Maple Isam Fir	Low Low	Variable Variable N/A	Seeding Seeding	aspen 2 - 7" dbh. scattered cherry	
36	4130 Canopy Species	- Aspen	Pole/Log PoleSize Class	10 Detimb	71 er Well	16.5 Sub-Ca	d Maple Ilsam Fir 31 nopy Species	Low Low Immature Density	Variable Variable N/A Avg. Height	Seeding Seeding	aspen 2 - 7" dbh. scattered cherry	
36	4130 Canopy Species Sugar Maple	- Aspen - Cover	Pole/Log Pole/Size Class Pole/Sapling	10 Detimb DBH	71 er Well	16.5 Sub-Ca	d Maple Isam Fir 31 nopy Species Isam Fir	Low Low Immature Density Low	Variable Variable N/A Avg. Height >20 feet	Seeding Seeding Size Sapling	aspen 2 - 7" dbh. scattered cherry	
36	4130 Canopy Species Sugar Maple Quaking Aspen Black Cherry 4119 - Mixed No	- Aspen **Cover* 20 75 5 orthern Hard	Pole/Log Pole/Size Class Pole/Sapling Pole/Sapling Pole/Sapling	Dletimb DBH 6 5 5 bletimb	er Well Age 31	Ree Ba 16.5 Sub-Ca Ba Sug	ad Maple alsam Fir 31 nopy Species alsam Fir gar Maple 71	Low Low Immature Density Low Medium	Variable Variable N/A Avg. Height >20 feet 10 - 20 feet	Seeding Seeding Size Sapling Sapling	aspen 2 - 7" dbh. scattered cherry	
	Canopy Species Sugar Maple Quaking Aspen Black Cherry 4119 - Mixed No	60 - Aspen % Cover 20 75 5	Pole/Log Pole/Size Class Pole/Sapling Pole/Sapling Pole/Sapling Discrete Class	DBH 6 5 5 Deletimb	er Well Age 31 er Well Age	Ree Ba 16.5 Sub-Ca Ba Sug 14.8 Sub-Ca	ad Maple Ilsam Fir 31 nopy Species Ilsam Fir par Maple 71 nopy Species	Low Low Immature Density Low Medium 81-110 Density	Variable Variable N/A Avg. Height >20 feet 10 - 20 feet N/A Avg. Height	Seeding Seeding Size Sapling Sapling	aspen 2 - 7" dbh. scattered cherry	
	Canopy Species Sugar Maple Quaking Aspen Black Cherry 4119 - Mixed No Canopy Species Sugar Maple	- Aspen **Cover* 20 75 5 orthern Hard	Pole/Log Pole/Sapling Pole/Sapling Pole/Sapling Pole/Sapling Pole/Sapling Pole/Sapling Pole/Sapling	Detimb DBH 6 5 5 Detimb DBH DBH 0 DBH	er Well Age 31	Ree Ba 16.5 Sub-Ca Ba Sug 14.8 Sub-Ca	ad Maple alsam Fir 31 nopy Species alsam Fir gar Maple 71	Low Low Immature Density Low Medium	Variable Variable N/A Avg. Height >20 feet 10 - 20 feet	Seeding Seeding Size Sapling Sapling	aspen 2 - 7" dbh. scattered cherry	
	Canopy Species Sugar Maple Quaking Aspen Black Cherry 4119 - Mixed No	60 - Aspen **Cover* 20 75 5 orthern Hard **Cover*	Pole/Log Pole/Size Class Pole/Sapling Pole/Sapling Pole/Sapling Discrete Class	DBH 6 5 5 Deletimb	er Well Age 31 er Well Age	Ree Ba 16.5 Sub-Ca Ba Sug 14.8 Sub-Ca	ad Maple Ilsam Fir 31 nopy Species Ilsam Fir par Maple 71 nopy Species	Low Low Immature Density Low Medium 81-110 Density	Variable Variable N/A Avg. Height >20 feet 10 - 20 feet N/A Avg. Height	Seeding Seeding Size Sapling Sapling	aspen 2 - 7" dbh. scattered cherry	
	Canopy Species Sugar Maple Quaking Aspen Black Cherry 4119 - Mixed No Canopy Species Sugar Maple	- Aspen - Cover 20 75 5 - Orthern Hard 70	Pole/Log Pole/Sapling Pole/Sapling Pole/Sapling Pole/Sapling Pole/Sapling Pole/Sapling Pole/Sapling	Detimb DBH 6 5 5 Detimb DBH DBH 0 DBH	er Well Age 31 er Well Age	Ree Ba 16.5 Sub-Ca Ba Sug 14.8 Sub-Ca	ad Maple Ilsam Fir 31 nopy Species Ilsam Fir par Maple 71 nopy Species	Low Low Immature Density Low Medium 81-110 Density	Variable Variable N/A Avg. Height >20 feet 10 - 20 feet N/A Avg. Height	Seeding Seeding Size Sapling Sapling	aspen 2 - 7" dbh. scattered cherry	
	4130 Canopy Species Sugar Maple Quaking Aspen Black Cherry 4119 - Mixed No Canopy Species Sugar Maple Red Maple	- Aspen **Cover* 20	Pole/Log Pole/Sapling Pole/Sapling Pole/Sapling Pole/Sapling Pole/Sapling Pole/Log Pole/Log Pole/Log	10 Dietimb 6 5 5	er Well Age 31 er Well Age	Ree Ba 16.5 Sub-Ca Ba Sug 14.8 Sub-Ca	ad Maple Ilsam Fir 31 nopy Species Ilsam Fir par Maple 71 nopy Species	Low Low Immature Density Low Medium 81-110 Density	Variable Variable N/A Avg. Height >20 feet 10 - 20 feet N/A Avg. Height	Seeding Seeding Size Sapling Sapling	aspen 2 - 7" dbh. scattered cherry	
37	4130 Canopy Species Sugar Maple Quaking Aspen Black Cherry 4119 - Mixed No Canopy Species Sugar Maple Red Maple Yellow Birch	- Aspen **Cover* 20 75 5 orthern Hard **Cover* 70 5 5	Pole/Log Pole/Sapling Pole/Sapling Pole/Sapling Pole/Sapling Pole/Log Pole/Log Pole/Log Log/Pole	10 DBH 6 5 5 Dletimb DBH 9 9 10	er Well Age 31 er Well Age	Ree Ba 16.5 Sub-Ca Ba Sug 14.8 Sub-Ca	ad Maple Ilsam Fir 31 nopy Species Ilsam Fir par Maple 71 nopy Species	Low Low Immature Density Low Medium 81-110 Density	Variable Variable N/A Avg. Height >20 feet 10 - 20 feet N/A Avg. Height	Seeding Seeding Size Sapling Sapling	aspen 2 - 7" dbh. scattered cherry	



Stand	d Level 4 Co	over Type	;	Size De	nsity	Acres	Stand Age I	BA Range	Managed Site		General Comments
38	4112 - Maple, Asso	Beech, Ch ociation	nerry F	Poletimb	er Well	4.9	71	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	
	Sugar Maple	55	Pole/Log	9	71	Su	gar Maple	Low	Variable	Seeding	
	Red Maple	30	Log/Pole	10		Re	ed Maple	Low	Variable	Seeding	
	Yellow Birch	5	Log/Pole	10		Ва	alsam Fir	Low	Variable	Seeding	
	Paper Birch	5	Pole/Log	8							
	Black Cherry	5	Pole/Log	10							
39	4112 - Maple, Asso	Beech, Ch	nerry F	Poletimb	er Well	5.0	71	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	
	Sugar Maple	40	Log/Pole	10		Su	gar Maple	Low	Variable	Seeding	
	Red Maple	60	Pole/Log	9	71	Re	ed Maple	Low	Variable	Tall Shrub	
40	629 - Mixed nor	n-forested v	vetland	Nonsto	ocked	3.7	l	Jnspecified	No		bog pond
41		wland Ceda		Sawtimb		105.8		Jnspecified	N/A		strips or runs of well stocked b ash swales - very wet with standing water. N end of the stand is higher stocked to cedar with tag
	Canopy Species		Size Class		Age		anopy Species		Avg. Height	Size	alder.heavy winter deer use 3/20/20
	Red Maple	10	Log	12			lack Ash	Medium	>20 feet	Sapling	
	Yellow Birch	10	Log/Pole	12		T	ag Alder	Medium	5 - 10 feet	Tall Shrub	
	Paper Birch	5	Pole	8							
	White Spruce	5	Log	12							
No	orthern White Cedar	50	Log	12	102						
	Black Ash	5	Pole	6							
	Hemlock	15	XLog	18							
42	4110 - Sugar M			Poletimb		121.9	73	111-140	N/A		good form on h maple. scattered upland cedar. very scattered large w pine 24-30" dbh. areas of heavy h maple saplings. rolling hills with vernal
	Canopy Species		Size Class		Age		anopy Species		Avg. Height	Size	areas in bowls
	Sugar Maple	80	Log	12	73		gar Maple	Medium	10 - 20 feet	Sapling	
	Red Maple	10	Log	12		Ir	ronwood	High	10 - 20 feet	Sapling	
	Yellow Birch	5	Log	12							
	Hemlock	5	Log	16							
43	4130	- Aspen	F	Poletimb	er Well	11.5	32 l	Jnspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	
	Paper Birch	5	Sapling/Pole	4		Su	gar Maple	Medium	5 - 10 feet	Sapling	
	Red Maple	10	Sapling	3							
	Quaking Aspen	85	Pole/Sapling	5	32						



Stand	d Level 4 C	Size Density			Acres	Stand Age BA Range		Managed 9	Site	General Comments	MICHIGAN .	
44	4130		Sapling W		4.1	17	Immature	N/A				
	Canopy Species	% Cover	Size Class		I Age							
	Quaking Aspen	90	Sapling	2	17							
	Balsam Fir	5	Sapling	1								
	White Spruce	5	Sapling	1								
45	6120 - Lo	wland Ceda	r	Sawtimb	er Well	13.0	102	Unspecified	N/A			
	Canopy Species	% Cover			I Age		nopy Specie		Avg. Height	Size		
	Yellow Birch	10	Log/Pole	10			ag Alder	Medium	5 - 10 feet	Tall Shrub		
	Black Ash	30	Pole/Log	9		Bl	ack Ash	Medium	>20 feet	Sapling		
No	orthern White Cedar	55	Log	12	102							
	Hemlock	5	XLog	20								
46	6120 - Lo	wland Ceda	r	Poletimb	er Well	5.6	76	111-140	N/A		springs throughout the stand	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size		
No	orthern White Cedar	50	Log/Pole	10		Ta	ag Alder	Low	5 - 10 feet	Tall Shrub		
	Black Spruce	50	Pole	8	76						-	
47	4112 - Maple, Asso	Beech, Ch	erry	Sawtimb	er Well	12.3	71	81-110	N/A			
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size		
	Sugar Maple	70	Log/Pole	12	71	Sug	gar Maple	Low	Variable	Tall Shrub		
	Red Maple	20	Log/Pole	10		Re	d Maple	Low	Variable	Seeding		
	Yellow Birch	5	Log/Pole	12		Ва	lsam Fir	Low	Variable	Seeding		
	Black Cherry	5	Log/Pole	10		Whi	te Spruce	Low	Variable	Seeding		
48	4110 - Sugar N	laple Assoc	ciation	Poletimb	er Well	3.9	71	81-110	N/A			
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size		
	Sugar Maple	75	Log/Pole	10	71	Sug	gar Maple	Medium	10 - 20 feet	Sapling		
	Red Maple	8	Log/Pole	10		Re	ed Maple	Medium	10 - 20 feet	Sapling		
	Yellow Birch	9	Log	10								
	Basswood	8	Log/Pole	10								
49	6229 - Mixed	l lowland sh	rub	Nonst	ocked	21.4		Unspecified	No		open, cattail marsh. scattered snags. N end holds heavy tag alde	·r
50	6122 - Bl	ack Spruce		Poletimb	er Well	5.6	58	Unspecified	N/A			
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size		
	Quaking Aspen	10	Log/Pole	10		Ва	Isam Fir	Low	Variable	Seeding		
	Balsam Fir	10	Pole/Sapling	g 7		Blad	ck Spruce	Low	Variable	Seeding		
	Black Spruce Tamarack	60	Pole Log/Pole	7 10	58							



Stand	Level 4 Cover Type			Size Density		Acres Stand Age	BA Range	Managed Site		General Comments	MICHIGAN
51	4115 - Y.Birch, Hemlock NH		NH F	Poletimber Well		8.5 71	81-110	N/A		scattered upland cedar	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Canopy Specie	es Density	Avg. Height	Size		
	Sugar Maple	40	Log/Pole	10	71	Sugar Maple	Low	Variable	Seeding		
	Red Maple	30	Log/Pole	10		Red Maple	Low	Variable	Seeding		
	Yellow Birch	15	Log/Pole	10		Balsam Fir	Low	Variable	Seeding		
	White Spruce	5	Log	12							
	Hemlock	10	Log	16							
52	629 - Mixed nor	ı-forested v	vetland	Nonst	ocked	62.1	Unspecified	No		McMillan Creek and floodplain, tag alder, scattered lowland conifer	r
53	6122 - Bl	ack Spruce	e i	Poletimb	er Well	7.1 59	Unspecified	N/A			
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Canopy Specie	es Density	Avg. Height	Size		
	Balsam Poplar	5	Log/Pole	10		Balsam Fir	Low	Variable	Seeding		
	Black Spruce	95	Pole	7	59	Tag Alder	Medium	Variable	Tall Shrub		
54	4134 - Aspen, Spruce/Fir			Saplin	g Well	3.9 17	Immature	N/A			
	Canopy Species	% Cover	Size Class	DBH	l Age						
	Red Maple	10	Sapling	1							
	Quaking Aspen	60	Sapling	1	17						
	Balsam Fir	20	Sapling	1							
	White Spruce	10	Sapling	1							
55	6124 - Lowla	and Spruce	-Fir [Poletimb	er Well	7.2 58	51-80	N/A			
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Canopy Specie	es Density	Avg. Height	Size		
	Balsam Poplar	10	Log/Pole	10		Balsam Fir	Low	Variable	Seeding		
	Balsam Fir	20	Pole	8		Black Spruce	Low	Variable	Seeding		
	Black Spruce	45	Pole/Sapling	j 7	58						
	Tamarack	20	Log/Pole	10							
	White Pine	5	Log	16							
56	4134 - Aspe	en, Spruce/	/Fir F	Poletimb	er Well	43.5 48	Unspecified	N/A		many inclusions of smaller diameter trees. small inclusions of hard	dwoo
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Canopy Specie	es Density	Avg. Height	Size		
	Quaking Aspen	70	Pole	6	48	Balsam Fir	Low	Variable	Seeding		
	Balsam Poplar	5	Pole	6		White Spruce	Low	Variable	Seeding		
	Balsam Fir	20	Pole	6							
	Balballiii	1									



Stand	Level 4 Cover Type			Size Density		Acres	Stand Age BA Range		Managed S	ite	General Comments
58	4139 - Aspen, Mixed Deciduous		duous	Poletimber Well		5.6	48	81-110	N/A		W edge heavier to b ash
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Sugar Maple	30	Pole	7		Su	gar Maple	Low	Variable	Sapling	
	Red Maple	15	Log/Pole	10		Re	ed Maple	Low	Variable	Sapling	
	Quaking Aspen	55	Pole/Log	9	48	Ва	ılsam Fir	Low	Variable	Sapling	
59	4134 - Asp	en, Spruce/	Fir	Sapling	y Well	14.7	28	Unspecified	N/A		stand just starting to produce poletimber size class.
	Canopy Species	% Cover	Size Class	DBH	l Age						
	Quaking Aspen	70	Sapling/Pole	e 3	28						
	Balsam Fir	15	Sapling	2							
	White Spruce	15	Sapling	2							
60	6122 - B	lack Spruce	•	Poletimb	er Well	5.2	58	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Quaking Aspen	10	Log/Pole	10		Ва	ılsam Fir	Medium	5 - 10 feet	Sapling	
	Balsam Fir	20	Pole	8		Bla	ck Spruce	Low	10 - 20 feet	Sapling	
	White Spruce	15	Pole	6	_					-	•
	Black Spruce	50	Pole	6	58						
	White Pine	5	Log/Pole	12							
61	4134 - Aspen, Spruce/Fir			Sapling I	Medium	28.1	25	Unspecified	N/A		mixed stand of spruce/fir, aspen. areas/strips of highly stocked
	Canopy Species	% Cover	Size Class	DBH	l Age						spruce/fir. Aspen is nearing poletimber stand classification
	Quaking Aspen	70	Sapling/Pole	e 4	25						
	Balsam Fir	20	Sapling	2							
	White Spruce	10	Sapling	2							
62	6128 - Lowland Coniferous, Mixed Deciduous		Mixed	Poletimber Poor		81.0	88	Unspecified	N/A		stand is open old beaver meadows in many sections, interspersed with patches of forested land. S end of stand heavier stocked. areas of tag
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	alder thicket. creek
	Sugar Maple	5	Pole	8		Ва	ılsam Fir	Low	5 - 10 feet	Sapling	
	Yellow Birch	5	Pole	8		Ta	ag Alder	Low	5 - 10 feet	Tall Shrub	
	Paper Birch	5	Log/Pole	10							-
	Balsam Fir	15	Pole	8							
	Black Spruce	20	Pole	8							
No	orthern White Cedar	30	Pole	8	88						